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FILE 'MEDLINE' ENTERED AT 18:57:47 ON 17 OCT 2005
=> s (betaine hcl) or (betaine hdrochloric acid)
           242 (BETAINE HCL) OR (BETAINE HDROCHLORIC ACID)
=> s (betaine hcl) or (betaine hydrochloric acid)
           242 (BETAINE HCL) OR (BETAINE HYDROCHLORIC ACID)
=> s pepsin
         41098 PEPSIN
=> s 12 and 13
            13 L2 AND L3
=> d 1-13 ab, bib
     ANSWER 1 OF 13 CA COPYRIGHT 2005 ACS on STN
L4
     The present invention provides a stabilized protonic formulation comprised
AB
     primarily of proteins, enzymes and pH adjusters, all in specific ratios to
     one another, a liquid medium which, when combined to the protonic
     formulation, initiates activation of the amino acids within the protonic
     formulation, and a stabilizing component which stabilizes the amino acids
     during the process of their activation. The optimum ratio of enzyme
     activator formulation to protein mixture is about 1:25, though 1 part enzyme
     activator formulation to 10 to 30 parts protein mixture will function
     suitably for the intended purpose. The enzyme activator formulation is
     optimally comprised of: betaine-HCl 4.0%,
     pepsin 1.5%, trypsin 0.4%, chymotrypsin 0.3%, protease 0.4%,
     bromelain 0.5%, papaya 0.6%, vitamin C 5.0%, lemon powder 0.6%, glutamic
     acid 0.2%, and glycine 86.4%. The protein sources and mixture that works
     best with the enzyme activator formulation includes: whey protein isolate
     30.0%, instant whey concentrate 15.0%, soy protein isolate 25.0%, pea protein 5.0%, rice protein 5.0%, maltodextrin 15.7%, steviocide 0.3%, french
     vanilla flavor 1.75%, peach mango flavor 0.5%, xanthan gum 0.5%, lecithin
     0.5%, and tricalcium phosphate 0.75%. Clin. tests and studies have shown
     that, with use of the protonic mixture, about 30 to 40% more amino acids are
     utilized than when the protonic mixture is not used.
AN
     143:114482 CA
TТ
     Protein formulation comprising enzymes and pH adjusters for improved
     bioavailability of amino acids
TN
     Ernest, Michael
PA
     Doctor's Signature Sales and Marketing International Corp., USA
SO
     U.S. Pat. Appl. Publ., 11 pp.
     CODEN: USXXCO
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO.
                         KIND
                                DATE
                                            APPLICATION NO.
                                                                     DATE
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     US 2005152887
                          A1
                                 20050714
                                             US 2004-757706
                                                                     20040114
PRAI US 2004-757706
                                 20040114
     ANSWER 2 OF 13 CA COPYRIGHT 2005 ACS on STN
L4
AB
     A complex enzyme composition that improves growth and feed digestion by animals
     comprises pancreatin 200, betaine-HCl 50, monobasic
     calcium phosphate 100, \alpha-amylase 150, \beta-amylase 100, lipase 50,
     pepsin 100, and cellulase 100 mg.
AN
     142:218044 CA
TI
     Complex enzyme composition containing pancreatin, betaine-
```

AN 142:218044 CA
TI Complex enzyme composition containing pancreatin, betaineHCl, and calcium phosphate as feed additive
IN Han, In Kyu
PA S. Korea
SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DT Patent
LA Korean

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	KR 2002041162	Α	20020601	KR 2000-70943	20001127
DDΔT	KP 2000-70943		20001127		

L4 ANSWER 3 OF 13 CA COPYRIGHT 2005 ACS on STN

A composition containing betaine hydrochloride and pepsin as powders, AΒ pancreatin,  $\alpha$ -amylase,  $\beta$ -amylase, lipase, cellulase, dibasic calcium phosphate as an enzyme complex, Lactobacillus acidophilus, Bifidobacteria longum, fructooligosaccharide or the like as a probiotics complex, a vitamin complex and a mineral complex is provided which inhibits proliferation of intestinal harmful microorganisms and enhances immunoactivity. The composition contains 78 mg betaine HCl 50 mg pepsin, 15 mg pancreatin, 11 mg  $\alpha$ -amylase, 8 mg  $\beta$ -amylase, 4 mg lipase, 7.5 mg cellulase, 7.5 mg dibasic calcium phosphate, 1.25 billon Lactobacillus acidophilus, Lactobacillus bulgaricus, etc. 900 million Bifidobacteria longum and Bifidobacterium breve, 180 million Streptococcus thermophilus, 375 mg fructooligosaccharide, 450 IU vitamin A, 675 IU  $\beta$ -carotene, 56 mg vitamin C, 23 IU vitamin D, 23 IU vitamin E, 7.5 µg vitamin K, 3.8 mg thiamine, 3.4 mg riboflavin, 5.6 mg niacin, 3.4 mg pyridoxine, 11 µg cobalamin, 28 µg biotin, 8.4 mg pantothenic acid, 8.4 mg choline, 28.1 mg Ca, 18.8 mg P, 0.9 mg Fe, 12 μg I, 17 mg Mg, 1.7 mg Zn, 11 μg Se, 0.1 mg sulfuric acid, 0.6 mg Mn, 11 µg chromium picolinate, 0.6 mg Mo, 0.6 mg K, 0.3 mg betaine, 0.2 mg B, 3.8 mg L-lysine 2.0 mg phenylalanine, 2.0 mg L-tyrosine, a trace amount of kelp powder and 4.7 mg polyunsatd. fatty acid.

AN: 142:204717 CA

TI Nutrients containing betaine, enzymes, Lactobacillus, Bifidobacteria, fructooligosaccharides, vitamins and minerals

IN Han, In Kyu; Kim, Yu Yong

PA S. Korea

SO Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7

DT Patent

LA Korean

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI KR 2003025587	A	20030329	KR 2001-58713	20010921
PRAI KR 2001-58713		20010921		

## L4 ANSWER 4 OF 13 CA COPYRIGHT 2005 ACS on STN

AB A protonic formulation is provided comprising a protein mixture and a mix. of enzymes and pH adjusters selected for proper activation, pH adjustment, and attainment of pK for the amino acids and optimization of bioavailability of the amino acids. The optimum ratio of enzyme activator formulation to protein mixture is about 1:25, though 1 part enzyme activator formulation to 10-30 parts protein mixture will function suitably for the intended purpose. The enzyme activator formulation is optimally comprised of: betaine-HCl 4.0%, pepsin 1.5%, trypsin 0.4%, chymotrypsin 0.3%, protease 0.4%, bromelain 0.5%, papaya 0.6%, vitamin C 5.0%, lemon powder 0.6%, glutamic acid 0.2%, and glycine 86.4%. The protein sources and mixture that works best with the enzyme activator formulation includes: whey protein isolate 30.0%, instant whey concentrate 15.0%, soy protein isolate 25.0%, pea protein 5.0%, rice protein 5.0%, maltodextrin 15.7%, steviocide 0.3%, french vanilla flavor 1.75%, peach mango flavor 0.5%, xanthan gum 0.5%, lecithin 0.5%, and tricalcium phosphate 0.75%. Clin. tests have shown that, with use of the protonic mixture, about 30-40% more amino acids are utilized than when the protonic mixture is not used.

AN 138:169167 CA

TI Protein formulation with enzymes and pH adjusters for improved bioavailability of amino acids

IN Ernest, Michael

PA Life Force International, USA

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

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DT
     Patient.
LΑ
     English
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                            APPLICATION NO.
                                                                    DATE
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                         A2
A3
PΙ
     WO 2003014304
                                            WO 2002-US24662
                                20030220
                                                                    20020802
     WO 2003014304
                                20030501
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI US 2001-311280P
                          Ρ
                                20010809
     ANSWER 5 OF 13 CA COPYRIGHT 2005 ACS on STN
L4
AB
     An herbal formulation useful as a food supplement for re-establishing
     intestinal bacteria and rebuilding intestinal mucosa comprises 25-35%
     betaine HCl, 2-7% plant enzymes, 1-4% papain, 0.5-5%
     probiotic micro flora, 2-7% fructooligosaccharides, 5-15% L-glutamine,
     2-7% quercitin, 2-7% butyric acid, 5-15% borage seed, 5-15% flax seed,
     5-10% lecithin, and 5-15% of a mixture containing γ-oryzanol, bromelain,
     pepsin, and N-acetylglucosamine. The formulation may be mixed
     together, compressed and formed into a capsule for oral administration.
AN
     137:129879 CA
TI
     Herbal formulation containing enzymes for rebuilding intestinal bacteria
     Terry, Travis L.; Watson, Tommy Stanley; Watson, Brenda F.
IN
PA
     Renew Life, Inc., USA
SO
     U.S., 3 pp.
     CODEN: USXXAM
DT
     Patent
LΑ
     English
FAN.CNT 1
     PATENT NO.
                    KIND DATE
                                           APPLICATION NO.
                                                                  DATE
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                                _____
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     US 6426099
                        B1
                                20020730 US 1998-204036
PΙ
                                                                    19981201
PRAI US 1997-67271P
                         P
                                19971203
RE.CNT 4
              THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
L4
     ANSWER 6 OF 13 CA COPYRIGHT 2005 ACS on STN
     The therapeutic efficacy of dexamethasone and a natural pig surfactant
AB
     preparation was investigated in a rabbit aspiration model. Lung injury was
     induced by intratracheal administration of 2 mL of a betaine-
     HCl-pepsin mixture/kg. Dexamethasone was given i.v. in
     two doses (D1 = 7.5 \text{ mg/kg}; D2 = 3.75 \text{ mg/kg}; D2 6 h post D1). In different
     groups D1 was injected at different times before and after aspiration.
     Natural surfactant was administered 24 h post lung injury in a single dose
     of 12 mg phospholipids/kg. The therapeutic potential was evaluated by
     measuring static lung compliance and the difference in a lung volume between
     0 and 20 mm Hg airway pressure. No therapeutic effect of dexamethasone
     was seen at any time of application. In contrast, the intratracheal
     administration of natural surfactant 24 h post injury completely reversed
     the deterioration of lung mech. properties.
     119:86523 CA
AN
ΤI
     Experimental aspiration trauma: Comparison of steroid treatment versus
     exogenous natural surfactant
ΑU
     Strohmaier, W.; Schlag, G.
CS
     Ludwig Boltzmann Inst. Exp. Clin. Traumatol., Vienna, Austria
SO
     Experimental Lung Research (1993), 19(3), 397-405
     CODEN: EXLRDA; ISSN: 0190-2148
DT
     Journal
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LΑ

English

- L4 ANSWER 7 OF 13 CA COPYRIGHT 2005 ACS on STN
- AB Pharmaceuticals for treatment of digestive tract disorders in domestic animals contain betaine-HCl 10-30, antacid carbohydrate digestive enzymes 1-10, antacid cellulose-degrading enzymes 1-10, antacid protein digestive enzymes 20-40, and saccharification bacteria spore powder 10-30% by weight Thus, a pharmaceutical was prepared by mixing betaine-HCl 200, carbohydrate digestive enzyme 50, a cellulose degrading enzyme 50, sugar-containing pepsin 300, saccharification bacterial spore powder 200, lactose 100 parts by weight, and potato starch q.s.
- AN 112:62655 CA
- TI Pharmaceuticals for treatment of digestive tract disorders of domestic animals
- IN Masuda, Takashi
- PA Toa Yakuhin Kogyo K. K., Japan
- SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01132533	A2	19890525	JP 1987-289628	19871118
PRAI JP 1987-289628		19871118		

- L4 ANSWER 8 OF 13 CA COPYRIGHT 2005 ACS on STN
- The characteristic enzymic activity, using the gastrointestinal model, of the acid-resistant digestive enzyme which had been added to the preparation containing betaine-HCl was determined and compared with those of folk digestive enzyme prepns. The deviation of the wts. of those prepns. was also investigated. The present preparation shows it digestive activity in the acid range and act in the stomach. The digestive activity using the shaking methods and the separated methods, i.e. amylase, protease and lipase did not fulfill the standard activity of the digestive enzyme prepns. The digestion using the gastrointestinal model was about the same as that of the digestive enzyme prepns. fulfilling th criteria and, especially in the gastric model, it was same or more than that. The prepns. in which more than 2 types of granules, had been mixed fulfilled the requirements of the weight variation in the Japanese Pharmacopoeis, but the mixture ratio of those was variable.
- AN 109:176308 CA
- TI The characteristic digestive activity of the preparation containing betaine hydrochloride
- AU Murakami, Tadayasu; Kawashima, Mikio; Sasaki, Masanori; Kobayashi, Shinichi; Yamada, Fusayo; Asahina, Kikuo
- CS Res. Lab., Toa Pharm. Co., Ltd., Tatebayashi, 374, Japan
- SO Yakuri to Chiryo (1973-2000) (1988), 16(2), 771-8 CODEN: YACHDS; ISSN: 0386-3603
- DT Journal
- LA Japanese
- L4 ANSWER 9 OF 13 CA COPYRIGHT 2005 ACS on STN
- Oval compns. for decreasing the symptoms of digestive dysfunction contain a pancreatic enzyme extract, a protelytic enzyme from plants, a choleretic agent, a HCl source and pepsin [9001-75-6]. Bromelain [9001-00-7] and pancreatin [8049-47-6] were adsorbed onto digestible sucrose-starch beads which were coated with while lac glaze. These beads were then coated with stearic acid and carnauba wax. A mixture of ox bile extract, pepsin, betaine-HCl [590-46-5] and guar gum was blended with H2O to give a dough which was screened, dried, and the resultant granules ground and dry-screened to the mesh. The granules were mixed with the coated beads and blended with hydrogenated vegetable oil, microcryst. cellulose, and Mg stearate. The mixture was punched into tablets and coated with a zein solution
- AN 101:28325 CA
- TI Enzyme-containing digestive aid compositions
- IN Bilton, Gerald L.
- PA USA

SO U.S., 4 pp. CODEN: USXXAM DTPatent English LΑ FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE --------------A 19840508 US 1983-462995 A1 19850815 WO 1984-US159 PΙ US 4447412 19830201 WO 8503438 19840203 W: JP RW: AT, BE, CH, DE, FR, GB, LU, NL, SE A1 19860226 EP 1984-901130 EP 172166 19840203 R: AT, BE, CH, DE, FR, GB, LI, LU, NL, SE 19840210 CA 1213543 A1 19861104 CA 1984-447208 PRAI US 1983-462995 19830201 Α WO 1984-US159 19840203 ANSWER 10 OF 13 CA COPYRIGHT 2005 ACS on STN L4A review with refs. of betaine-HCl [590-46-5], AB glutamic acid-HCl [138-15-8], diluted HCl, and pepsin [9001-75-6] as ingredients in over-the-counter (OTC) drug products for use as stomach acidifiers. Based upon the lack of adequate data to establish the effectiveness of these or any other ingredients of stomach acidifiers used in treating achlorhydria and hypochlorhydria, and because such conditions are asymptomatic and not ameniable to self-diagnosis, any OTC drug product containing ingredients offered for use as stomach acidifiers cannot be considered generally recognized as safe and effective. 92:47160 CA ΑN Stomach acidifier drug products for over-the-counter human use; proposed TТ rulemaking CS Food and Drug Administration, Rockville, MD, 20857, USA Federal Register (1979), 44(204), 60316-20, 19 Oct 1979 SO CODEN: FEREAC; ISSN: 0097-6326 DT` Journal; General Review English LΑ L4ANSWER 11 OF 13 CA COPYRIGHT 2005 ACS on STN AB A combination of 455 mg. betaine-HCl and 60 mg. pepsin (1:10,000 U.S.P. unit), having the mixed powder particles coated with 141 mg. methylcellulose, is placed in capsules. The mixture is useful as a gradual producer of HCl in patients with achlorhydria or hypochlorhydria. Glutamic acid-HCl can replace the betaine-HC1. AN 51:83316 CA OREF 51:15073b-c Preparation containing betaine hydrochloride for treatment of achlorhydria and hypochlorhydria TN Sahyun, Melville DТ Patent LΑ Unavailable FAN.CNT 1 PATENT NO. KIND DATE PATENT NO. APPLICATION NO. ----------PΙ US 2798837 19570709 ANSWER 12 OF 13 CA COPYRIGHT 2005 ACS on STN L4AB Betaine unites with HCl loosely to form a compound which readily breaks up into its components in aqueous solution Because of this property the substance forms a convenient medium for the administration of HCl. Betaine -HCl contains 23.8% of HCl. Acidol is a proprietary name for the substance and its mixts. with pepsin are called "acidol-

into its components in aqueous solution Because of this property the substance forms a convenient medium for the administration of HCl. Betaine
-HCl contains 23.8% of HCl. Acidol is a proprietary name for the substance and its mixts. with pepsin are called "acidol-pepsin." Betaine-HCl is a white, crystalline, odorless substance of an acid reaction and taste. About 10 yrs. ago the acid contents of acidol and of acidol-pepsin were determined. The amts. found were substantially as claimed. The acid was determined by titration with N KOH, using phenolphthalein as indicator, and by precipitation with AgNO3 and weighing as AgCl. Recently new specimens of each product were examined. The old products were reexamd. and the results compared. The acidity and

the proteolytic activity of the new specimens were essentially as claimed. The acidity of the old specimens had not changed much in 10 yrs., but the proteolytic activity had disappeared.

AN . 14:18796 CA OREF 14:3501b-d

TI Acidol and acidol-pepsin

AU Anon

SO Rep. Lab. Am. Med. Assoc. (1919), 12, 91-3

DT Journal

LA Unavailable

L4 ANSWER 13 OF 13 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN

AB An herbal formulation comprises betaine HCl, plant enzymes, papain, probiotic micro flora, fruitooligosaccharides, l-glutamine, quercitin, butyric acid, borage seed, flax seed, lecithin, gamma oryzanol, bromelain, pepsin, and N-acetylglucosamine.

AN 2002:477375 BIOSIS

DN PREV200200477375

TI Herbal formulation for rebuilding intestinal bacteria.

AU Terry, Travis L. [Inventor, Reprint author]; Watson, Tommy Stanley [Inventor]; Watson, Brenda F. [Inventor]

CS Clearwater, FL, USA

ASSIGNEE: Renew Life, Inc., Clearwater, FL, USA

PI US 6426099 20020730

SO Official Gazette of the United States Patent and Trademark Office Patents, (July 30, 2002) Vol. 1260, No. 5. http://www.uspto.gov/web/menu/patdata.html. e-file.

CODEN: OGUPE7. ISSN: 0098-1133.

DT Patent

LA English

ED Entered STN: 11 Sep 2002

Last Updated on STN: 11 Sep 2002